



Natick Soldier Center Camouflage Evaluation Facility (CEF)

Overview:

Technological advances in sensors drive the requirement for enhanced individual signature reduction against current and emerging sensors as employed in battlefield and civilian scenarios. The Materials Integration Team works with DoD users to define and quantify requirements in support of systems that are responsive to diverse operational scenarios. Current projects include head/face and hand treatments, Reversible Camouflage, Improved Visual and Near-Infrared Camouflage Protection, and Short-Wave Infrared Camouflage Protection. All of these efforts are greatly enhanced by evaluations made in the Camouflage Evaluation Facility.

The **Camouflage Evaluation Facility (CEF)** provides us the capability to evaluate current, experimental and foreign camouflage patterns year round. Camouflage items are evaluated within the settings through the various sensors.

Four environmental settings are represented: desert, woodland, urban and arctic. Live plants and desert sand add visual realism and proper reflectance characteristics for measurements. The facility is equipped with a calibrated lighting system that can accurately simulate a wide range of moonlit and moonless night sky conditions. Unlike outdoor tests sites, which are never constant and continually changing, the CEF provides a controlled environment, a standardized baseline in which camouflage items can be evaluated and measured. In-house measurements improve data reliability and test validity.

This facility saves time and money as it enables us to evaluate camouflage and eliminate the least effective patterns prior to committing to expensive field testing. It provides the capability to quickly evaluate the effectiveness of foreign camouflage materials and items. The CEF is also used for evaluation of the effect of minor deviations from specification requirements on overall camouflage effectiveness prior to the procurement of textile based items.

Another capability is the **Terrain Analysis System (TAS)**, which enables us to collect spectral terrain data through the various wavelengths from any background environment of interest. The data is processed through a computer program. The scene can then be broken down into a user-specified number of the most predominant colors and shapes in the scene and used to design a camouflage pattern.

Partners in academia, industry and other government agencies are encouraged to contact us. Beyond military scenarios, camouflage and signature reduction are of commercial interest in areas such as sports/outdoor/hunting apparel and law enforcement.

Point of Contact:

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